



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)	
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Tateki JOZAKI et al.)	Group Art Unit: <i>Unassigned</i>
)	
U.S. Serial No.: 10/670,399)	Examiner: <i>Unassigned</i>
)	
Filed: September 26, 2003)	
)	
For: TRANSMISSION CONTROLLER OF V-)	Docket No. 000560.00126
BELT CONTINUOUSLY VARIABLE)	
AUTOMATIC TRANSMISSION)	

STATEMENT OF RELEVANCY OF JAPANESE REFERENCES

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: December 23, 2003

Sir:

The following patent documents are cited in the Information Disclosure

Statement submitted with this statement:

1. Japanese Patent Application (Laid-open Kokai) JP05-087221
Title: REDUCTION RATIO CONTROL METHOD OF CONTINUOUSLY
VARIABLE TRANSMISSION FOR VEHICLE AND CONTROLLER
THEREOF
Publication Date: April 6, 1993
Application Number: JP03-135338 May 13, 1991
IPC: F16H 61/00, F16H 9/00 //F16H 59:24, F16H 59:54
Applicant: AISIN AW CO LTD

The applicants have reviewed the reference and provide the following statement
of relevance:

This reference discloses the means to shift a V-belt type continuously variable transmission down to a specified reduction ratio at the time of car engine braking by detecting the running conditions of throttle opening and brake operation or the like in a vehicle, and starting this down-shift operation at a time when a brake operating signal is inputted.

Car running conditions such as car speed, throttle opening, output shaft torque, brake operation and so on are detected by each of car running condition detecting means 91-95, while a control signal,, controlling a reduction ratio control mechanism according to the detecting signal, is outputted by a logical circuit 912, and the supply and discharge of hydraulic fluid for a hydraulic servo are controlled so as to make the reduction ratio control mechanism vary the reduction ratio of a V-belt type continuously variable transmission. An electric control circuit 90 stores (942) a brake operating signal when it is inputted, while it sets (943) the preset input pulley control revolution RH as a down-shift desired value, comparing (944) it with the current input pulley revolution of a vehicle, and the reduction ratio control mechanism is controlled so as to make this down-shift operation be started.

2. Japanese Patent Application (Laid-open - Kokai) JP08-312741
Title: CONTROL DEVICE FOR CONTINUOUSLY VARIABLE
AUTOMATIC TRANSMISSION

Publication Date: November 26, 1996
Application Number: JP07-115886 May 15, 1995
IPC: F16H 9/00, F16H 61/12 //F16H 59:44, F16H 59:70
Applicant: NISSAN MOTOR CO LTD

The applicants have reviewed the reference and provide the following statement of relevance:

This reference discloses the means to prevent the occurrence of the slip of a belt during reacceleration in the middle of deceleration by a method wherein when it is detected that a car speed is below a given value, a maximum oil pressure is fed to a variable pulley on the driven side until a time in which the car speed attains the lowest gear ratio position.

A step motor 113 drives a speed change control valve 112 so that a change gear ratio is adjusted to a value corresponding to a signal from a step motor drive circuit 109 and a line pressure fed to a drive pulley cylinder chamber and a driven pulley cylinder chamber is oppositely reciprocally increased and decreased. A line pressure solenoid drive circuit 110 controls the position of the line pressure solenoid 115 of a hydraulic control part 102, and an oil pressure from a hydraulic pump is adjusted to a proper line pressure, to be a target, through a modifier 116 and a regulator 117. The line pressure is fed to a speed change control valve 112 or respective pulleys 16 and 26. Namely, until a time in which a continuously variable transmission is

brought into the lowest gear ratio, the maximum pressure is set as a line pressure and when a gear ratio is reduced to the lowest value, a minimum pressure is set as a line pressure.

3. Japanese Patent Application (Laid-open - Kokai) JP09-329228
Title: AUTOMATIC CONTINUOUSLY VARIABLE TRANSMISSION
Publication Date: December 22, 1997
Application Number: JP08-144343 June 6, 1996
IPC: F16G 61/12, F16H 9/00 //F16H 59:68
Applicant: NISSAN MOTOR CO LTD

The applicants have reviewed the reference and provide the following statement of relevance:

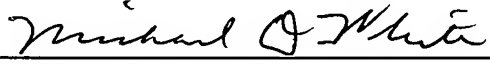
This reference discloses the means to detect abnormal reduction of line pressure surely by comparing a real gear ratio and a target gear ratio with each other when the target gear ratio is a prescribed value or more.

An abnormal judgment flag F is researched. The flag F is set when line pressure is in an abnormal condition, there is not the abnormal condition in a reset condition ($F=0$). In the case where there is not the abnormal condition, is judged whether car speed is a prescribed value or more, and the target value of a gear ratio (ip) is equivalently to a lowest value (Low) or not. In the case where that condition is set up, it is judged whether the real value of the gear ratio (ip) exceeds a value which a prescribed value a is added to, the lowest value (Low) or not. In the case where the condition of the real gear ratio (ip) > the lowest

value (Low) + a is satisfied, an apparent gear ratio is increased by belt slip following with reduction of line pressure, abnormal condition of line pressure is judged, and the gear ratio is fixed to the highest value (Hi) after the abnormal flag F Is set. In the case where each judgment condition is not set up, shift control at the time of a normal condition is carried out.

Respectfully submitted,

Tateki JOZAKI et al.

By: 
Michael D. White
Reg. No. 32,795
Attorney for Applicant

Attachments

Customer No. 002779
BLANK ROME LLP
600 New Hampshire Avenue, N.W.
Washington, D.C. 20037
Telephone: (202) 772-5800
Facsimile: (202) 572-8398